FACT SHEET FOR: OP18R1-030 **DATE: DRAFT**

NDEE ID: 000125

Name of Source: Dutton-Lainson Co.

Source Classification: Class I at time of issuance
Major Source of Hazardous Air Pollutants (HAPs)

Regulatory changes may supersede information in this document. If the source should add or change equipment or change processes such that a NESHAP or NSPS subpart becomes an applicable requirement, it is the source's obligation to comply with that subpart and applicable requirements whether or not they are identified in the associated permitting action or Title 129. Also note that the NESHAP and NSPS subparts are subject to change. Detailed information related to NESHAP and NSPS subparts can be found on the NDEE Air Toxics Notebook and NDEE NSPS Notebook located on the NDEE website ([HYPERLINK "http://dee.ne.gov/"]). The NDEE website can also be used to find other permit related and facility specific information that is not identified in this fact sheet.

DESCRIPTION OF THE SOURCE OR ACTIVITY:

This operating permit OP18R1-030 approves the operation of a fabricated metal products manufacturing facility located at 1601 W 2nd Street, Hastings, Nebraska. Activities at the facility include batch vapor degreasing, painting operations, use of a paint burn off oven, and use of process boilers and heaters.

PERMIT HISTORY

Date Issued	Number	Status
12/13/2002	CP02-0030	Active
01/01/2003	OPSP0281	Not active; superseded by OPSPR1-0026
07/16/2003	OPSPMOD-0006	Not active; superseded by OPSPR1-0026
04/26/2008	OPSPR1-0026	Not active; Condition III.(A) and Condition III.(B)(2)(a) amended by OPSPMOD-0052; superseded by OP12R1-015
05/08/2008	OPSPMOD-0052	Not active; superseded by OP12R1-015
02/28/2015	OP12R1-015	Not active; superseded by OP18R1-030
TBD	OP18R1-030	Active

PERMIT ACTION:

Permitted Emission Points are detailed in the table below:

Emission Point ID#	Control Equipment ID# and Description	Emission Unit Description	Relevant Standards
357-1	Freeboard Refrigeration Device, Reduced Room Draft, and a Freeboard Ratio of 1	Existing Batch Vapor Degreaser, installed in 1980, and retrofitted in April 1998.	NESHAP 40 CFR 63 Subpart T
358-4	None	Paint Burn Off Oven (Pyrolysis® Cleaning Furnace, Model: PTR-150), with a 0.3 MMBtu/hr natural gas burner, equipped with an afterburner, 10 lb/hr charging rate capacity, installed in 1989	None

Emission Point ID#	Control Equipment ID# and Description	Emission Unit Description	Relevant Standards
358-1	Dry Filter system with 98% control efficiency	Powder Paint Booth – automatic spray area; Booth contains a color module which filters and recycles overspray powder paint	None
358-2	Dry Filters with a 98% control efficiency	Powder Paint Booth – touch-up; and Lacquer – spray painting	None
358-5	None	Dip Painting Operation - Water Based	None
351-2	None	0.5 MMBtu/hr natural gas-fired, zinc die cast process heater (integrated with die cast machine), existing unit, installed in 1946.	NESHAP 40 CFR Part 63, Subparts A and DDDDD
357-2	None	0.59 MMBtu/hr natural gas-fired degreaser boiler, new unit, installed in 2015.	NESHAP 40 CFR Part 63, Subparts A and DDDDD
351-1	None	Zinc die cast machine, maximum capacity of 207 lb/hr zinc, installed in 1946.	None
359-1	None[1]	Zinc Electroplating Lines (rack and barrel process) – the chromic acid tank uses passivation (no electrical current) to apply chromium to part.	None

[1] Emission Point ID# 359-1 has 4 high efficiency (99% control) wet scrubbers to control HCl and alkaline vapors. The facility is not claiming the control efficiency in emission calculations and the scrubbers are not required by any Title 129 regulations. Therefore, the scrubbers are not regulated by this permit.

TYPE AND QUANTITY OF AIR CONTAMINANT EMISSIONS ANTICIPATED:

The following table summarizes the potential and actual emissions:

Regulated Pollutant	Potential Emissions as limited by permit (tons/year)	Actual Emissions[2] (tons/year)
Particulate Matter (PM)	1.67	_[3]
Particulate Matter less than or equal to 10 microns (PM_{10})	1.67	0.19
Particulate Matter less than or equal to 2.5 microns ($PM_{2.5}$)	1.67	0
Sulfur Dioxide (SO_2)	0.13	0
Oxides of Nitrogen (NO_x)	26.03	0.20
Carbon Monoxide (CO)	7.33	0.13
Volatile Organic Compounds (VOCs)	102.95	13.06
Greenhouse Gases (GHGs)[1]	10,403.21	630.01
Carbon Dioxide Equivalents (CO_2e)[1]	10,413.70	630.25
Hazardous Air Pollutants (HAPs)		

Regulated Pollutant	Potential Emissions as limited by permit (tons/year)	Actual Emissions[2] (tons/year)
Greatest Individual HAP: Trichloroethylene	15.51	12.61
All Other HAPs	3.36	0.11
Total HAPs	18.87	12.72

[1] The U.S. Supreme Court ruled in 2014 that greenhouse gases (GHGs) may not be used to determine whether a source is a Class I (major) source. Utility Air Regulatory Group v. EPA, 134 S.Ct. 2427 (2014). Therefore, potential emissions of GHGs will not be used to determine a source's operating permit classification at this time. However, GHGs are still regulated air pollutants so GHGs and CO2e will continue to be calculated and reported in this fact sheet.

[2] Actual Emissions are from 2018 air emissions inventory, submitted January 23, 2019.

[3] Actual PM emissions do not have to be reported in the emissions inventory.

SUPPLEMENTAL INFORMATION:

Title 129, Chapter 18 - New Source Performance Standards (NSPS)

There are no New Source Performance Standards (NSPS) under 40 CFR Part 60 that are applicable to this source.

The following NSPS appear to be applicable but are not:

Subpart Dc – Small Industrial-Commercial-Institutional Steam Generating Units

The NSPS for Small Industrial-Commercial-Institutional Steam Generating Units, found at 40 CFR 60 Subpart Dc, adopted by reference at Title 129, Chapter 18, Section 001.52, only applies to steam generating units with a heat input greater than 10 million British thermal units per hour (MMBtu/hr). None of the boilers at this facility have a heat input greater than 10 MMBtu/hr.

Subpart E – Incinerators

The NSPS for Incinerators, found at 40 CFR 60 Subpart E, adopted by reference at Title 129, Chapter 18, Section 001.30, only applies to incinerators that can charge more than 45 metric tons/day (50 tons/day) and commence construction or modification after Aug 17, 1971. The paint burn-off oven (emission point EP 358-4) does not have a charging rate of over 50 tons per day.

Subpart DDDD – Emission Guidelines for Commercial and Industrial Solid Waste Incineration Units

The Emission Guidelines for Commercial and Industrial Solid Waste Incineration (CISWI) Units (40 CFR 60 Subpart DDDD, adopted by reference at Title 129, Chapter 18, Section 001.73), only applies to CISWI units that commenced construction on or before June 4, 2010. In the Federal Register issued March 21, 2011 (76 FR 15704), paint burn-off ovens were considered CISWI units subject to this rule. EPA issued the final action on the reconsideration on February 7, 2013 (78 FR 9112). This final action states that paint burn-off ovens are not considered an incinerator under this subpart (per the 40 CFR Subpart 60.2875 definition for a burn-off oven). Therefore, the paint burn-off oven, emission unit 358-4, is considered an incinerator but not a CISWI unit; and not subject to NSPS Subpart DDDD.

Title 129, Chapter 20 - Particulate Emissions; Limitations and Standards

Process Weight Rate (Section 001)

Title 129, Chapter 20, Section 001, limits PM (filterable) emissions to the amounts shown in Table 20-1 during any one hour. These process weight rate limits, which are based on throughput of the emission units, vary as throughputs change. Since the potential to emit for each emission point is less than the process weight rate limitations, these PM limitations were not included in Condition III of this permit.

Particulate Emissions from Combustion Sources (Section 002)

All of the PM emission points subject to the Chapter 20, Section 002 limitations are in compliance with those limitations, as the potential to emit for each emission point is less than the limitations. Therefore, these PM limitations were not included in Condition III of this permit.

Opacity Limitations from Emission Units (Section 004)

Specific Condition I.(O) specifies that no person shall cause or allow emissions, from any source, which has an opacity equal to or greater than twenty percent (20%). Opacity must be determined using an EPA-approved method or recorded by a continuous opacity monitoring system which has been operated and maintained pursuant to 40 CFR Part 60 Appendix B except as provided for in Chapter 20, Sections 005 and 006 (Title 129, Chapter 20, Section 004). Therefore, while not specifically stated in Condition III, this requirement is still applicable to all emission units at the source.

Title 129, Chapter 24 - Sulfur Compound Emissions

The permit includes a condition that limits SO_x emissions from fuel combustion to 2.5 lb/MMBtu per Title 129, Chapter 24, Section 001 for combustion emission units that existed prior to February 26, 1974. It is unlikely the emission unit 351-2 will exceed this limit, given the only fuel allowed is natural gas. The AP-42 emission factor for natural gas combustion from Table 1.4-2 is 0.6 lb/MMcf, or approximately 0.0006 lb/MMBtu. Therefore, no testing or monitoring is required for the SO_x limit.

Title 129, Chapter 28 - National Emission Standards for Hazardous Air Pollutants (NESHAP)

The source is considered a major source of HAPS since the PTE for a single HAP and total HAPs are above 10 and 25 tons per year, respectively. This facility is subject to the standards summarized below.

Subpart A – General Provision:

This subpart, adopted by reference in Title 129, Chapter 28, Section 001.01, applies to the owner or operator of any stationary source that emits or has the potential to emit any hazardous air pollutant listed in or pursuant to section 112(b) of the Act; and is subject to any standard, limitation, prohibition, or federally enforceable requirement established pursuant to Part 63. This source is subject to this subpart because it is subject to one or more subparts contained in Part 63 and emits hazardous air pollutants listed in section 112(b) of the Act.

Subpart T – Halogenated Solvent Cleaning:

This subpart, adopted by reference in Title 129, Chapter 28, Section 001.05, applies to specified solvent cleaning machines using any solvent containing methylene chloride (CAS # 75092), perchloroethylene (CAS # 127184), trichloroethylene (CAS # 79016), 1,1,1-trichloroethane (CAS #71556), carbon tetrachloride (CAS # 56235), or chloroform (CAS #67663), or any combination of these halogenated HAP solvents, in total concentration greater than 5% by weight, at either major or area sources of HAPs. This source is a major source of HAPs since the batch vapor degreaser exceeds 10 tons/yr potential emissions of a single HAP. The source uses a batch vapor solvent cleaning machine with trichloroethylene (TCE) as the solvent, which makes it an affected facility under Subpart T.

The specifics of the equipment design, operational/monitoring requirements, and reporting/recordkeeping requirements are in the permit per the request of Dutton-Lainson. If the facility wishes to choose an alternative compliance option, when allowed by Subpart T, an operating permit modification application will need to be submitted to the Department. If the subpart is modified during the operating permit period, the facility is subject to the most current version of NESHAP Subpart T.

On May 3, 2007, EPA modified NESHAP Subpart T. The modification included adding the facility-wide limits in 40 CFR Subpart 63.471. The batch vapor degreaser is an existing unit, and it had a compliance date of May 3, 2010. By the compliance date, the facility needed to submit an initial notification identifying the type of machine, the control device(s), date of installation, and estimated annual

halogenated HAP solvent consumed. Dutton-Lainson submitted the initial notification on January 29, 2009.

Subpart DDDDD – Industrial, Commercial, Institutional Boilers and Process Heaters at Major Sources. This subpart, adopted by reference in Title 129, Chapter 28, Section 001.70, applies to major sources of HAPs with boilers and process heaters. The zinc die cast process heater (Unit #351-2) and the degreaser boiler (Unit #357-2) are subject to this subpart. These units are in the subcategory of "Unit designed to burn gas 1 fuels subcategory" since they only combust natural gas.

Units designed to burn gas 1 fuels subcategory are required to conduct periodic tune-ups of each unit. Since the zinc die cast process heater (Unit #351-2) and the degreaser boiler (Unit #357-2) are less than 5 MMBtu/hr units, tune-ups must be conducted at least once every five (5) years.

The following NESHAPs appear to be applicable but are not:

Subpart N – Chromium Electroplating & Anodizing:

This subpart, adopted by reference in Title 129, Chapter 28, Section 001.02, applies to each chromium electroplating or chromium anodizing tank at facilities performing hard chromium electroplating, decorative chromium electroplating, or chromium anodizing. This facility is not subject to Subpart N since the tank containing chromic acid does not have an electrical current [§63.340(c)]. Chromium is applied using passivation.

Subpart MMMM – Miscellaneous Metal Parts and Products.

This subpart, adopted by reference in Title 129, Chapter 28, Section 001.81, applies to surface coating of miscellaneous metal parts and products located at a major HAP source, which uses 250 gallons/yr or more of coatings that contain organic HAP. The surface coating includes associated activities, such as surface preparation, cleaning, mixing, and storage. The potential surface coating operations include emission units 358-1, 358-2, and 358-5 (paint department excluding cure oven and burn-off oven). The majority of the painting is conducted in emission unit 358-1 using powder paints. Powder paint does not contain organic HAPs. The facility uses solvents in the touch-up booth (358-2) that may contain organic HAPs. The other painting operations (358-5) are typically water-based coatings. The facility uses ethylene glycol butyl ether (EGBE) as a thinner in the painting operations. The EGBE (CAS# 111762) was previously a HAP, but in the November 29, 2004 Federal Register (69FR69320) EPA delisted EGBE as an HAP in the Clean Air Act. NDEE has removed EGBE as an HAP in Title 129.

The facility will need to keep records to demonstrate that the painting operations do not exceed 250 gallons/yr coatings that contain organic HAPs. When determining applicability with NESHAP Subpart MMMM, all painting activities are considered together, not per the emissions of each unit. If the facility adds new painting operations in the future (even those potential emissions below construction permit thresholds), the new painting operations would need to be considered in determining MMMM applicability. If the facility exceeds the 250 gal/yr or more threshold of organic HAP-containing coatings, then the facility must comply with all applicable requirements of Subpart MMMM and make the appropriate notifications to the NDEE.

The facility worked with the NDEE and EPA to determine that the facility's plating operation does not constitute a surface coating operation containing HAPs. This determination was due to the fact that the only tank in the zinc electroplating process that contains a HAP is the chrome conversion tank and that operation was deemed exempt because the conversion coating consists of only a dilute chromatic acid-water solution. From the Subpart MMMM definition of coating found at Subpart 63.3981, materials consisting of only acids are not considered coatings for the purposes of Subpart MMMM. EPA headquarters sent an email on October 31, 2006 to EPA Region 7 (NDEE & Dutton-Lainson have a copy) with determination that the plating operations are exempt from NESHAP Subpart MMMM.

SPECIFIC PERMIT CONDITIONS DISCUSSION:

Condition III includes conditions that are specific to the emissions units and emission points listed in each respective condition. Permit conditions that require no additional discussion are not included in this section.

III.(A) Batch Vapor Degreaser

(A)(2) The degreaser is subject to NESHAP Subpart T because it uses trichloroethylene (TCE) in total concentration greater that 5% by weight as specified in Subpart T [40 CFR Subpart 63.460(a)].

(A)(3) The requirements for the batch vapor degreaser are to comply with NESHAP Subpart T, including a 14,100 kg 12-month rolling average of trichloroethylene, as well as emission limits for methylene chloride and multiple solvents, per 40 CFR 63.471. The facility-wide emission limits and the equation to demonstrate compliance with the facility-wide emission limits are located in 40 CFR Subpart 63.471(b)(2) and have been identified in the permit.

(A)(4) Operational and monitoring requirements are specified in NESHAP Subpart T. The batch vapor cleaning machines standards and design requirements are from Subpart 63.463(b)(2)(i), (a)(1)(ii), (a)(2), (a)(3), (a)(5) through (a)(6). A freeboard ratio of 0.75 or greater is required by Subpart 63.463(a)(2), and compliance with 63.463(b)(2)(i) shall be demonstrated through compliance with the limit of 1.

(A)(5) Recordkeeping, and reporting requirements are specified in NESHAP Subpart T. NDEE has changed the date of the annual report (Subpart 63.468(f) – requiring training certification and solvent consumption) from February 1 in the NESHAP to March 31 in order to coordinate with the submittal of other reports.

III.(B) Paint Burn Off Oven

(B)(3) The paint burn off oven is considered to be an incinerator and as such is subject to the requirements of Title 129, Chapter 22. The conditions for the paint burn off oven were taken from the construction permit issued December 13, 2002. The PM emission limit is required by Title 129, Chapter 22, Section 002, and the opacity limitation is required by Title 129, Chapter 20, Section 004. If the burn-off oven is properly maintained and operated, it is not expected that the PM or the opacity will exceed the emission limits; therefore, PM testing is not required at this time (but NDEE may request this testing in the future) and Method 9 observations are not required to demonstrate compliance with opacity limit.

(B)(4) The burn-off oven can only burn the coating from metal parts; otherwise it may become subject to a NSPS subpart for incinerators (subpart depends on what is burned).

III.(C) Painting Operations

(C)(1) This condition applies to the powder paint, lacquer spray painting, and dip painting – water based. The painting operations were grouped because: (1) the hand touch-up powder paint and the lacquer spray painting are conducted in the same spray booth; and (2) the amount of liquid paint and solvents used for lacquer spray painting and dip painting needs to be accounted for to determine the facility's applicability to NESHAP Subpart MMMM. The painting operations will become subject to NESHAP Subpart MMMM if the liquid surface coating chemicals (paint and solvents) that contain organic HAP content that exceed applicable emission limits [40 CFR Subpart 63.3941].

Title 129, Chapter 27, Section 002 (State BACT) is not required, because the facility will reach the NESHAP Subpart MMMM threshold (250 gallons/yr of coatings that contain organic HAP) before the State BACT threshold is reached.

(C)(4) The paint spraying booths are required to have a dry filter system (Unit #358-1) or dry filters (Unit #358-2) operated and maintained properly. The dry filter system and dry filters control particulate emissions. If they are operated and maintained properly, then they will demonstrate compliance with Title 129 Chapter 20 emission limits.

(C)(5) The condition requires recordkeeping that Dutton-Lainson must keep in order to show the facility is not subject to NESHAP Subpart MMMM. If additional painting operations are added to Dutton-Lainson in the future, then the HAP emissions need to be included in the NESHAP Subpart MMMM recordkeeping. Also, this condition requires recordkeeping demonstrating continuous compliance of Condition III.(C)(4).

III.(D) Process Boiler/Heaters

(D)(2) This condition specifies that the process heater and boiler are subject to NESHAP Subpart DDDDD. Dutton-Lainson is a major source for HAPs because of the batch vapor degreaser. This subpart applies to all boilers and process heaters located at major sources of HAPs, unless specifically exempted per §63.7491. Both units are classified as "Unit designed to burn gas 1 subcategory" because they burn natural gas only.

(D)(4) These units are subject to the operating and monitoring requirements of NESHAP Subpart DDDDD. These requirements include operating and maintaining the boiler/process heater in a manner consistent with safety and good air pollution control practices per Subpart 63.7500(b); including a tune-up of the boiler/process heater at least once per every 5 years as specified in Subpart 63.7500(e) and 63.7515(d). The tune-up requirements are identified in Subpart 63.7540(a)(12), which references Subpart 63.7540(a)(10).

(D)(5) These units are subject to the recordkeeping and reporting requirements of NESHAP Subpart DDDDD. The contents of the compliance report is required per Subpart 63.7550(a). Because these units only require a tune-up once every 5 years, they are required to submit the compliance report electronically to EPA at least once every 5-year period, per 40 CFR Subpart 63.7550(h)(3) and (b). The records for NESHAP Subpart DDDDD in accordance to Subpart 63.7555 that are applicable to this facility are listed in the permit; only Subpart 63.7555(a)(1), (a)(2), and (j) are applicable.

III.(F) Insignificant Activities

Although not required, NDEE recommends that the permittee submit a written notification to NDEE if there are additions or changes to the list of insignificant activities identified in Specific Condition III.(F)(1), containing the following suggested information:

- A brief description of the addition or change within the permitted source;
- The date on which the addition or change occurred;
- Any change in potential emissions; and
- The criteria, as defined the in Operating Permit Application Forms, used to determine that the addition or change to the list of insignificant activities qualifies as insignificant.

This notification helps the NDEE keep an up to date list on file for compliance purposes. In addition, because emissions from insignificant activities must be counted toward major source (Class I) applicability, it is important to know if a source makes additions or changes to the list of insignificant activities that would cause a change in potential to emit at the source, and ultimately whether the source has a change in classification (i.e., Class I vs. Class II).